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Attorney Docket: ET02-005
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In the Claims:

Please amend the claims as follows:

1. 1. (Currently Amended) A display controller for providing a luminance value to a

2. display comprising:

3. an original gamma correction mapping table containing entries describing

4. a default luminance value to be provided to said display for a

5. magnitude of a video input signal, said video input signal providing a

6. default pointer to said default luminance values indicative of said

7. magnitude;

8. a transformed gamma correction mapping table containing entries

9. describing transformed luminance values to be provided to said display

10. for said magnitude of said video input signal, said video input signal

11. providing a transformed pointer to said transformed luminance values

12. indicative of said magnitude,

13. a gamma correction transform circuit that receives a new contrast signal

14. and a new brightness signal, tests if the new contrast signal and the

15. new brightness signal are respectively equivalent to a default contrast

16. signal and a default brightness signal wherein:

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17   if the new contrast signal is equivalent to the default contrast

18   signal and the brightness signal is equivalent to the

19   default brightness signal, said a gamma correction

20   transform circuit is in communication with said default

21   gamma correction mapping table to designate the default

22   gamma correction mapping table for determining said

23   luminance values for said display,

24   if the new contrast signal is not equivalent to the default

25   contrast signal and/or the brightness signal is not

26   equivalent to the default brightness signal, said gamma

27   correction transform circuit transforms entries of said

28   default gamma correction mapping table as a function of

29   the contrast signal and the brightness signal, wherein

30   said gamma correction transform circuit is in

31   communication with said transformed gamma correction

32   mapping table to store said entries to said transformed

33   gamma correction mapping table.

34   ~~in communication with the original gamma correction mapping table to~~

35   ~~receive said entries and connected to receive a contrast signal and a~~

36   ~~brightness signal and from said contrast signal and brightness signal~~

37   ~~transform said entries to transformed luminance values; and~~

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38   ~~a transformed gamma correction mapping table in communication with the~~

39   ~~gamma correction transform circuit to receive the transformed~~

40   ~~luminance values, said gamma correction mapping table connected to~~

41   ~~receive a video signal whereby said video signal provides a pointer to~~

42   ~~said luminance values.~~

1   2.   (Original) The display controller of claim 1 wherein the gamma correction

2   transform circuit executes the function:

3        $$G\_new(i) = G\_orig((i * a) + b)$$

4   where:

5   i is a counter representing potential magnitude values of the

6   video signal,

7            $G\_new(i)$ is the transformed value of the luminance value for an

8   ith magnitude,

9   a is a magnitude of the contrast signal, and

10   b is a magnitude of the brightness signal.

1   3.   (Original) The display controller of claim 1 wherein the gamma correction

2   transform circuit executes the function:

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3 $$G\_new(i) = G\_orig(C_i)$$

4 where:

5
$$
\begin{aligned}
C_i &= b & i &= 0 \\
C_i &= C_{i-1} + a & i &> 0
\end{aligned}
$$

6 C_i is a pointing variable to the luminance values in the original

7 gamma correction mapping table,

8 i is a counter representing potential magnitude values of the

9 video signal,

10 *a is a magnitude of the contrast signal, and*

11 *b is a magnitude of the brightness signal.*

1 4. (Original) The display controller of claim 1 wherein the gamma correction

2 transform circuit is a microcontroller.

1 5. (Original) The display controller of claim 4 wherein the microcontroller executes a

2 program process that performs the function:

3 $$G\_new(i) = G\_orig((i*a) + b)$$

4 where:

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5   *i* is a counter representing potential magnitude values of the

6   video signal,

7   *G_new(i)* is the transformed value of the luminance value for an

8   *i*th magnitude,

9   *a is a magnitude of the contrast signal, and*

10   *b is a magnitude of the brightness signal.*

1   6.   (Original) The display controller of claim 4 wherein the microcontroller executes a

2   program process that performs the function:

3           $G\_new(i) = G\_orig(C_i)$

4   where:

5

$$C_i = b \quad \big| \, i = 0$$
$$C_i = C_{i-1} + a \, \big| \, i > 0$$

6   C_i is a pointing variable to the luminance values in the original

7   gamma correction mapping table,

8   *i* is a counter representing potential magnitude values of the

9   video signal,

10   *a is a magnitude of the contrast signal, and*

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11   *b is a magnitude of the brightness signal.*

1   7.   (Original) The display controller of claim 4 wherein the original gamma correction

2   mapping table is digital data stored in a memory.

1   8.   (Original) The display controller of claim 7 wherein the transformed gamma

2   correction mapping table is digital data stored in the memory.

1   9.   (Original) A display control system for providing luminance values to a display

2   comprising:

3   a microcontroller connected to receive a video signal, a contrast signal,

4   and a brightness signal; and

5   a memory in communication with the microcontroller to retain default

6   gamma correction data and transformed gamma correction data;

7   said microcontroller executing a program process comprising the steps of:

8   receiving a new contrast signal,

9   receiving a new brightness signal,

10   testing if the new contrast signal and the new brightness signal

11   are respectively equivalent to a default contrast signal and a

12   default brightness signal,

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13   if the new contrast signal is equivalent to the default contrast

14   signal and the brightness signal is equivalent to the default

15   brightness signal, designating the default gamma correction

16   mapping table for determining a luminance value for said

17   display,

18   if the new contrast signal is not equivalent to the default contrast

19   signal and/or the brightness signal is not equivalent to the

20   default brightness signal, transforming the default gamma

21   correction mapping table as a function of the contrast signal

22   and the brightness signal,

23   storing the transformed gamma correction mapping table to the

24   memory, and

25   if the new contrast signal is equivalent to the default contrast

26   signal and the brightness signal is equivalent to the default

27   brightness signal, mapping the video signal to determine the

28   luminance level from the default gamma correction mapping

29   table,

30   if the new contrast signal is not equivalent to the default contrast

31   signal and/or the brightness signal is not equivalent to the

32   default brightness signal, mapping the video signal to

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33   determine the luminance level from the transformed gamma

34   correction mapping table,

35   generating a luminance signal from the luminance level, and

36   transferring the luminance signal to the display.

1   10.   (Original) The display control system of claim 9 wherein the function is:

2        $$G\_new(i) = G\_orig((i * a) + b)$$

3   where:

4   i is a counter representing potential magnitude values of the

5   video signal,

6        $G\_new(i)$ is the transformed value of the luminance value for an

7   ith magnitude,

8   a is a magnitude of the contrast signal, and

9   b is a magnitude of the brightness signal.

1   11.   (Original) The display control system of claim 9 wherein the function is:

2        $$G\_new(i) = G\_orig(C_i)$$

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3   where:

4

$$C_i = b \quad | \; i = 0$$
$$C_i = C_{i-1} + a \; | \; i > 0$$

5   C_i is a pointing variable to the luminance values in the original

6   gamma correction mapping table,

7   i is a counter representing potential magnitude values of the

8   video signal,

9   *a is a magnitude of the contrast signal, and*

10   *b is a magnitude of the brightness signal.*

1   12.   (Original) A method for providing luminance value to a display comprising the

2   steps of:

3   receiving a new contrast signal,

4   receiving a new brightness signal,

5   testing if the new contrast signal and the new brightness signal

6   are respectively equivalent to a default contrast signal and a

7   default brightness signal,

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8   if the new contrast signal is equivalent to the default contrast

9   signal and the brightness signal is equivalent to the default

10   brightness signal, designating the default gamma correction

11   mapping table for determining a luminance value for said

12   display,

13   if the new contrast signal is not equivalent to the default contrast

14   signal and/or the brightness signal is not equivalent to the

15   default brightness signal, transforming the default gamma

16   correction mapping table as a function of the contrast signal

17   and the brightness signal,

18   storing the transformed gamma correction mapping table to the

19   memory, and

20   if the new contrast signal is equivalent to the default contrast

21   signal and the brightness signal is equivalent to the default

22   brightness signal, mapping the video signal to determine the

23   luminance level from the default gamma correction mapping

24   table,

25   if the new contrast signal is not equivalent to the default contrast

26   signal and/or the brightness signal is not equivalent to the

27   default brightness signal, mapping the video signal to

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28   determine the luminance level from the transformed gamma

29   correction mapping table,

30   generating a luminance signal from the luminance level, and

31   transferring the luminance signal to the display.

1   13.   (Original) The method of claim 12 wherein the function is:

2          $$G\_new(i) = G\_orig((i * a) + b)$$

3   where:

4   *i* is a counter representing potential magnitude values of the

5   video signal,

6   **G_new(i)** is the transformed value of the luminance value for an

7   *i*th magnitude,

8   *a is a magnitude of the contrast signal, and*

9   *b is a magnitude of the brightness signal.*

1   14.   (Original) The method of claim 12 wherein the function is:

2          $$G\_new(i) = G\_orig(C_i)$$

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3   where:

4

$$C_i = b \quad \big| i = 0$$
$$C_i = C_{i-1} + a \big| i > 0$$

5   C_i is a pointing variable to the luminance values in the original

6   gamma correction mapping table,

7   i is a counter representing potential magnitude values of the

8   video signal,

9   *a is a magnitude of the contrast signal, and*

10   *b is a magnitude of the brightness signal.*

1   15.   (Original) An apparatus for providing luminance value to a display comprising the

2   steps of:

3   means for receiving a new contrast signal,

4   means for receiving a new brightness signal,

5   means for testing if the new contrast signal and the new

6   brightness signal are respectively equivalent to a default

7   contrast signal and a default brightness signal,

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8   means for designating the default gamma correction mapping

9   table for determining a luminance value for said display, if

10   the new contrast signal is equivalent to the default contrast

11   signal and the brightness signal is equivalent to the default

12   brightness signal,

13   means for transforming the default gamma correction mapping

14   table as a function of the contrast signal and the brightness

15   signal, if the new contrast signal is not equivalent to the

16   default contrast signal and/or the brightness signal is not

17   equivalent to the default brightness signal,

18   means for storing the transformed gamma correction mapping

19   table to the memory, and

20   means for mapping the video signal to determine the luminance

21   level from the default gamma correction mapping table, if the

22   new contrast signal is equivalent to the default contrast

23   signal and the brightness signal is equivalent to the default

24   brightness signal,

25   means for mapping the video signal to determine the luminance

26   level from the transformed gamma correction mapping table,

27   if the new contrast signal is not equivalent to the default

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28   contrast signal and/or the brightness signal is not equivalent

29   to the default brightness signal,

30   means for generating a luminance signal from the luminance

31   level, and

32   means for transferring the luminance signal to the display.

1   16.   (Original) The apparatus of claim 15 wherein the function is:

2              $G\_new(i) = G\_orig((i*a)+b)$

3   where:

4   i is a counter representing potential magnitude values of the

5   video signal,

6                   $G\_new(i)$ is the transformed value of the luminance value for an

7   ith magnitude,

8   a is a magnitude of the contrast signal, and

9   b is a magnitude of the brightness signal.

1   17.   (Original) The apparatus of claim 15 wherein the function is:

2              $G\_new(i) = G\_orig(C_i)$

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3   where:

$$C_i = b \quad \big| \; i = 0$$
$$C_i = C_{i-1} + a \big| i > 0$$

5   C_i is a pointing variable to the luminance values in the original

6   gamma correction mapping table,

7   i is a counter representing potential magnitude values of the

8   video signal,

9   *a is a magnitude of the contrast signal, and*

10   *b is a magnitude of the brightness signal.*

1 18. (Original) A medium for retaining a computer program which, when executed on

2   a computing system, executes process for providing luminance value to a display

3   comprising the steps of:

4   receiving a new contrast signal,

5   receiving a new brightness signal,

6   testing if the new contrast signal and the new brightness signal

7   are respectively equivalent to a default contrast signal and a

8   default brightness signal,

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9   if the new contrast signal is equivalent to the default contrast

10   signal and the brightness signal is equivalent to the default

11   brightness signal, designating the default gamma correction

12   mapping table for determining a luminance value for said

13   display,

14   if the new contrast signal is not equivalent to the default contrast

15   signal and/or the brightness signal is not equivalent to the

16   default brightness signal, transforming the default gamma

17   correction mapping table as a function of the contrast signal

18   and the brightness signal,

19   storing the transformed gamma correction mapping table to the

20   memory, and

21   if the new contrast signal is equivalent to the default contrast

22   signal and the brightness signal is equivalent to the default

23   brightness signal, mapping the video signal to determine the

24   luminance level from the default gamma correction mapping

25   table,

26   if the new contrast signal is not equivalent to the default contrast

27   signal and/or the brightness signal is not equivalent to the

28   default brightness signal, mapping the video signal to

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29   determine the luminance level from the transformed gamma

30   correction mapping table,

31   generating a luminance signal from the luminance level, and

32   transferring the luminance signal to the display.

1   19.   (Original) The medium of claim 18 wherein the function is:

2      $$G\_new(i) = G\_orig((i*a)+b)$$

3   where:

4   i is a counter representing potential magnitude values of the

5   video signal,

6      $G\_new(i)$ is the transformed value of the luminance value for an

7   ith magnitude,

8   a is a magnitude of the contrast signal, and

9   b is a magnitude of the brightness signal.

1   20.   (Original) The medium of claim 18 wherein the function is:

2      $$G\_new(i) = G\_orig(C_i)$$

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3   where:

4

$$C_i = b \quad | \; i = 0$$
$$C_i = C_{i-1} + a \; | \; i > 0$$

5   C_i is a pointing variable to the luminance values in the original

6   gamma correction mapping table,

7   i is a counter representing potential magnitude values of the

8   video signal,

9   *a is a magnitude of the contrast signal, and*

10   *b is a magnitude of the brightness signal.*

21.   (Original) The medium of claim 18 wherein said medium is selected from

the program storage medium consisting of random access memory, read

only memory, magnetic storage devices, and optical storage devices.